

(19) World Intellectual Property
Organization
International Bureau



(43) International Publication Date
6 May 2005 (06.05.2005)

PCT

(10) International Publication Number
WO 2005/039488 A2

(51) International Patent Classification⁷: **A61K**

(21) International Application Number:
PCT/US2004/030607

(22) International Filing Date:
17 September 2004 (17.09.2004)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
60/509,105 6 October 2003 (06.10.2003) US

(71) Applicant (for all designated States except US):
CEDARS-SINAI MEDICAL CENTER [US/US];
8700 Beverly Boulevard, Los Angeles, CA 90048-1865
(US).

(72) Inventors; and

(75) Inventors/Applicants (for US only): **YU, John, S.**
[US/US]; 269 Ashdale Place, Los Angeles, CA 90048
(US). **EHTESHAM, Moneeb** [PK/US]; 2828 Old Hickory
Boulevard, #1601, Nashville, TN 37221 (US).

(74) Agents: **LEVY, Seth, D.** et al.; Davis Wright Tremaine
LLP, 865 Figueroa Street, Suite 2400, Los Angeles, CA
90017-2566 (US).

(81) Designated States (unless otherwise indicated, for every
kind of national protection available): AE, AG, AL, AM,
AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN,
CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI,
GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE,
KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD,
MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG,
PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM,
TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM,
ZW.

(84) Designated States (unless otherwise indicated, for every
kind of regional protection available): ARIPO (BW, GH,
GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM,
ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM),
European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI,
FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI,
SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ,
GW, ML, MR, NE, SN, TD, TG).

Published:

— without international search report and to be republished
upon receipt of that report

For two-letter codes and other abbreviations, refer to the "Guid-
ance Notes on Codes and Abbreviations" appearing at the begin-
ning of each regular issue of the PCT Gazette.

(54) Title: USE OF CXCR4 PROTEIN EXPRESSION ON THE SURFACE OF STEM CELLS AS A MARKER FOR TUMOR
TROPIC POTENTIAL

(57) Abstract: The present invention relates to tumor tropic stem cells, and particularly to neural stem cells, and their use as deliv-
ery vehicles for therapeutic gene products to neoplastic foci. The stem cells with tumor tropic potential are selected based on the
stem cells exhibiting CXCR4 receptors or an affinity for the chemokine SDF-1. The stem cells may additionally exhibit markers
characteristic of astrocytic progenitors. The stem cells may be administered as part of a treatment regimen including the chemokine
SDF-1.



WO 2005/039488 A2